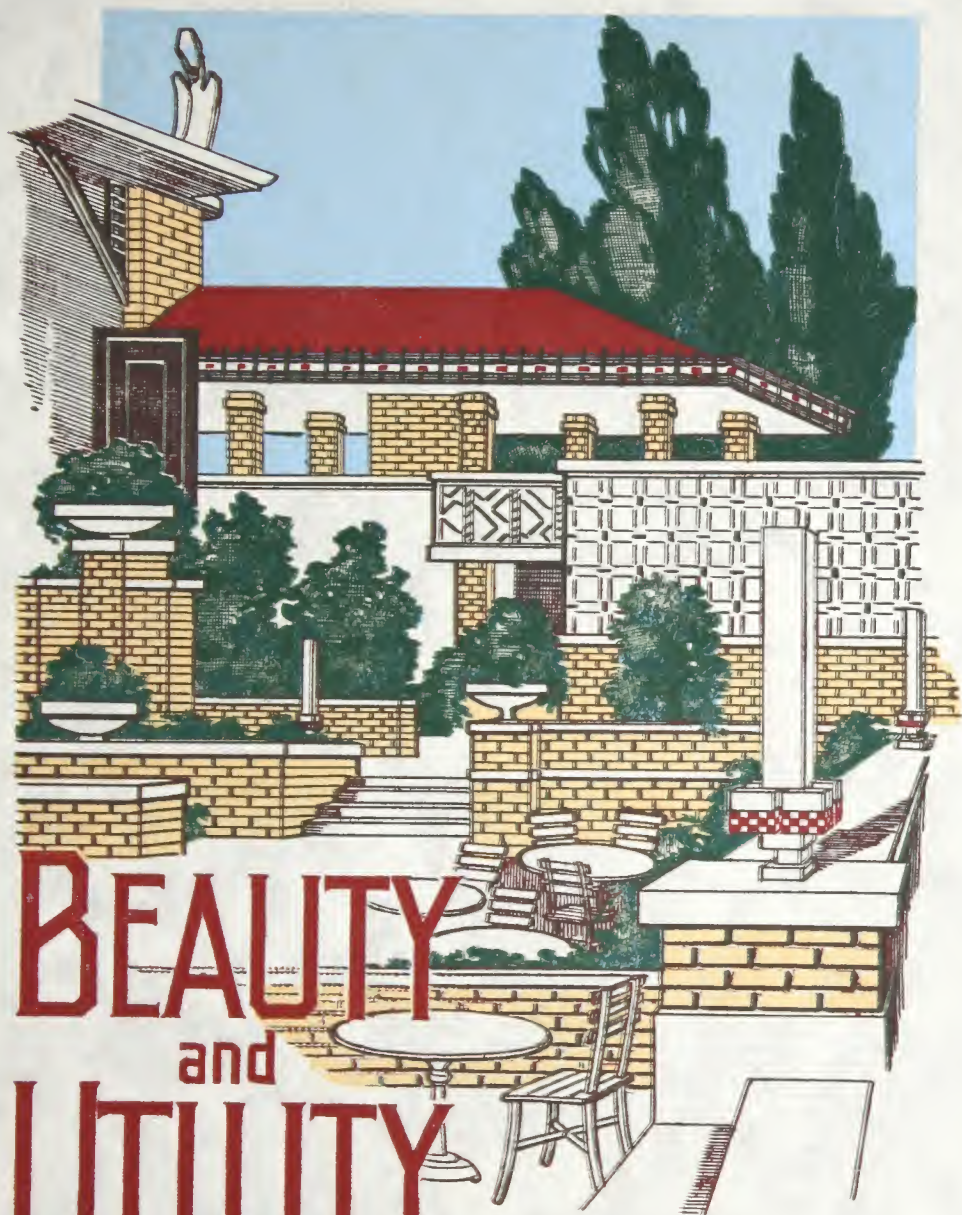


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BEAUTY
and
UTILITY

in CONCRETE

Construction



Beauty and Utility in Concrete



Chicago Portland Cement Co.

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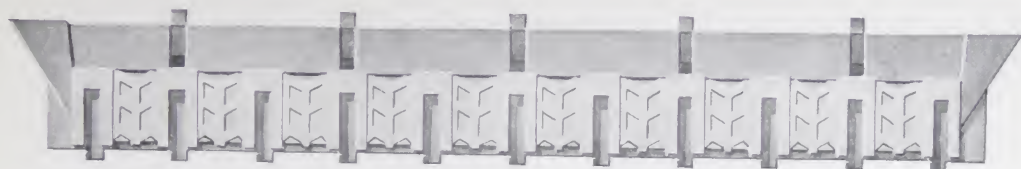
Chicago, Illinois

TO Architects and Students of
Architecture; to Contractors,
Builders and all who are interested
in advanced ideas and successful
accomplishments, this book is
presented.

Chicago Portland Cement Co.

Main Office:

30 North LaSalle Street, Chicago, Illinois



Beauty and Utility in Concrete



THE OBJECT of this book is to show, by word and picture, the adaptability of Portland Cement concrete to structures of an artistic nature.

The widespread use of Portland Cement concrete in heavy foundation work, piers and abutments, warehouses, factory buildings, streets and roads, has led many people to believe that concrete is adaptable only to the heavier types of construction, and entirely unsuited for finer craftsmanship.

When consideration is taken of the fact that Portland Cement is comparatively a new material and that it has been generally used only one decade, it is not surprising that greater advances have not been made in the use of Portland Cement as a decorative material.

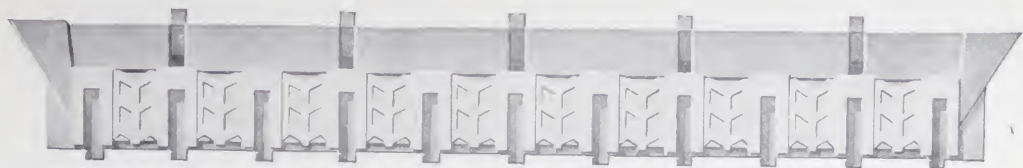
It is a fact that concrete is almost an ideal material for ornamental uses and elaborate designs. Portland Cement concrete lends itself most readily to duplication. It has an advantage over clay in the respect that it requires no firing. It has the advantage over stone, on which the work for a reproduction is as great as on the original. The comparatively slow setting properties of Portland Cement makes it possible to place this material more carefully and with greater precision than may be done with plaster or other materials which set rapidly. While the possibilities of concrete in ornamental work are almost unlimited, the scarcity of good examples of such work are largely due to the scarcity of artisans with ability to plan and execute ornamental structures. However, the few examples of decorative concrete which have been produced within the last few years, have been an incentive to architects and builders to experiment with Portland Cement, and it is safe to say that great advances of an esthetic nature will be made in architecture featuring the employment of Portland Cement concrete.

One of the latest examples of beauty and utility in concrete is the Midway Gardens in Chicago. This structure is doubtless the most

(Continued on page 5)



Winter Garden from street entrance. (Towers incomplete.)



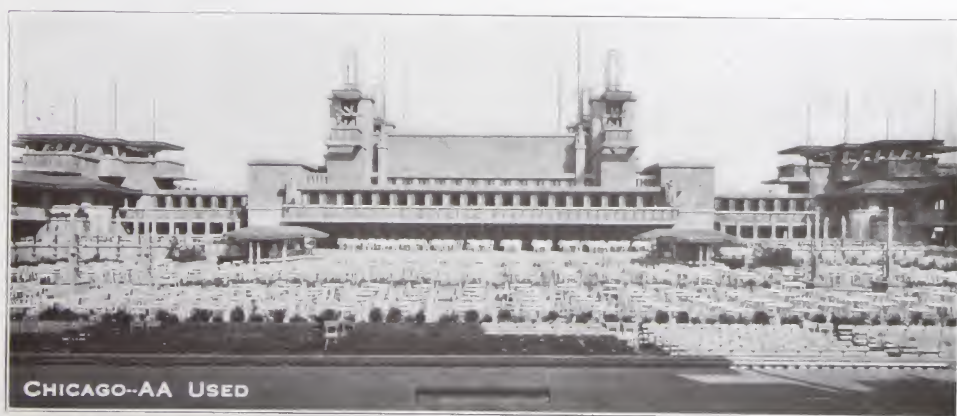
unique architectural conception in the world, and in view of the numerous requests we have had for information concerning this structure, from people who know CHICAGO-AA Portland Cement concrete was used throughout the entire work, we offer this publication with the sincere hope that the photographs and description may be an inspiration to architects and builders, and aid in the development of other concrete structures combining both beauty and utility.

Mr. Frank Lloyd Wright designed the Midway Gardens. Mr. A. Iannelli supervised the modeling of figures and panels. The Mueller Construction Company were the contractors and executed all concrete work with men especially trained for the work.

The following article from *The Cement Era* is a very good description of the Midway Gardens, the method of construction, etc:

“Portland Cement has now won its way to an unquestioned utility in building construction as in many other lines. As a cheap, efficient, enduring, fireproof building material it is unchallenged in its supremacy. But one often hears its praises tempered with the accusation, ‘It is so deplorably ugly.’ The unfortunate part of this statement is that only too often it is true. The worker in concrete has not always taken advantage of the artistic possibilities of his medium. Too often he has tried

(Continued on page 7)



Winter Garden from Orchestra Shell. (Towers incomplete.) This view gives an idea of the size of the Gardens.



Summer Garden. General view from Balcony over the Sunken Garden.



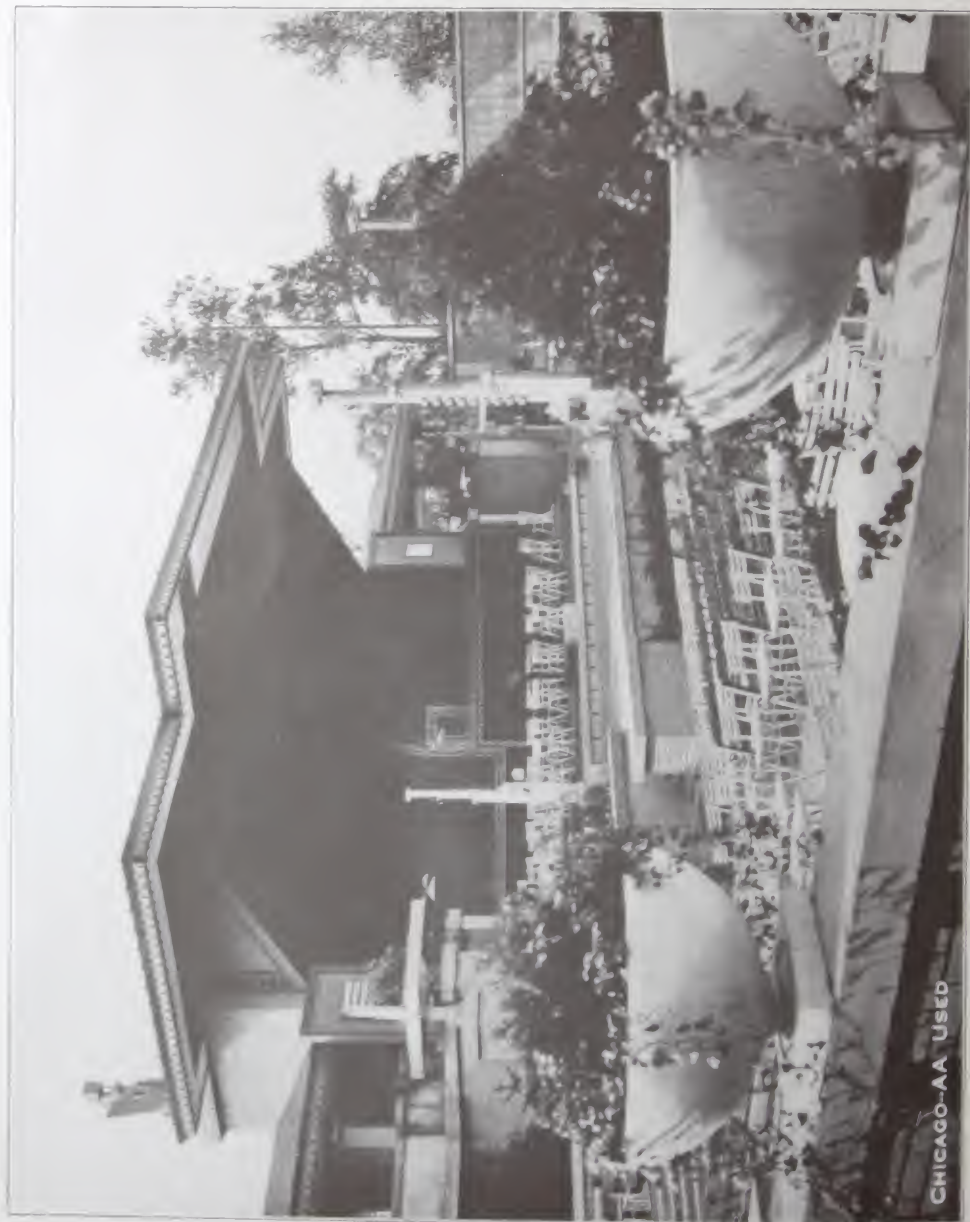
to conceal his concrete or to make it imitate some other material. He has sometimes lost sight of the fact that an architect and an artist are just as necessary to the asthetic success of a concrete structure as of one of brick or stone, and that an entirely different treatment is necessary. These are the causes for most of the glaring atrocities which have injured the good name of concrete as an architectural material.

“One needs only to turn to the Midway Gardens, the new summer home of music in Chicago, to have dispelled any false impressions about the beauty of concrete. Here an architect noted for his originality and success with concrete as a material for residences, aided by a sculptor alive to the possibilities of concrete as a medium for the expression of fine art, has produced a structure which cannot fail to excite commendation.

(Continued on page 9)



Summer Garden showing north Arcade.



Summer Garden—Orchestra Shell.

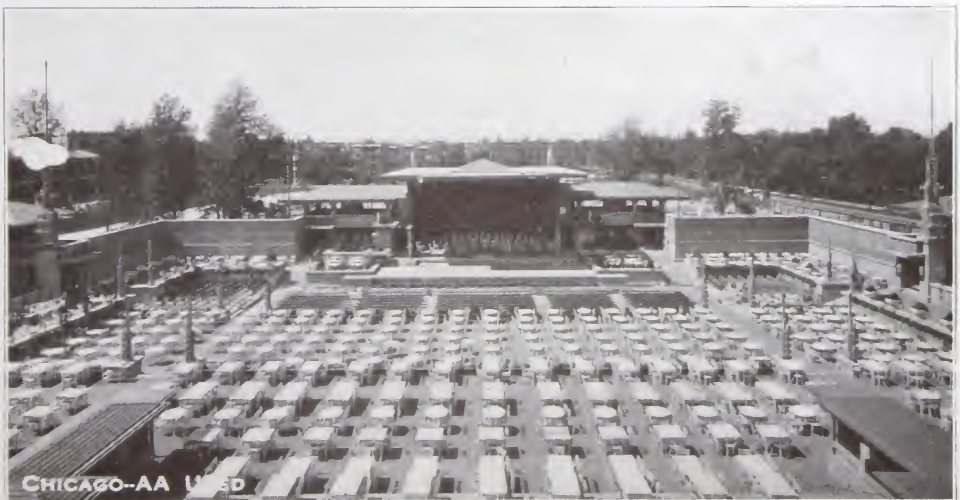


“The gardens are in an ideal location, at the southwest corner of Cottage Grove Avenue and Sixtieth Street, overlooking Washington Park and the famous Midway Plaisance. They are easily reached by surface and elevated lines and are in the heart of the great south side residence district of Chicago.

“In idea, the Midway Gardens are modeled after the gardens of Germany and other Continental European countries. A symphony orchestra, declared by music critics who have heard its preliminary concerts to be of high excellence, is to provide the piece de resistance of the evening’s entertainment. However, instead of the stiff rows of benches which have characterized other American parks of similar intent, the interior court is dotted with small white tables and chairs at which the audience may supplement its appreciation of music with a cooling glass or a comforting supper.

“Architecturally, the gardens are modeled after nothing European. They are not an attempt to reproduce a Greek temple or a Swiss chalet, but are purely and originally American. They bear upon them unmistakably the stamp of their architect, Frank Lloyd Wright, with their

(Continued on page 11)



Looking from the Roof Garden, down toward the Orchestra Shell.



CHICAGO-AA USED

Colored Decoration on natural cement plaster in Tavern. Designed by Frank Lloyd Wright, Architect. Executed by John Lloyd Wright.



continuous horizontal lines and low, broad overhanging eaves. Throughout the whole, concrete is the predominating feature. Some of the walls and columns are partly of cream colored brick, setting off the grey concrete work admirably, but the construction is fundamentally concrete. And the most wonderful part of it all, is the intricacy of some of the designs executed in concrete—elaborate sculpture with something of the oriental suggested in its delicate traceries. Those who see in concrete only a material to be used in bulky masses will be confounded by the results achieved here.

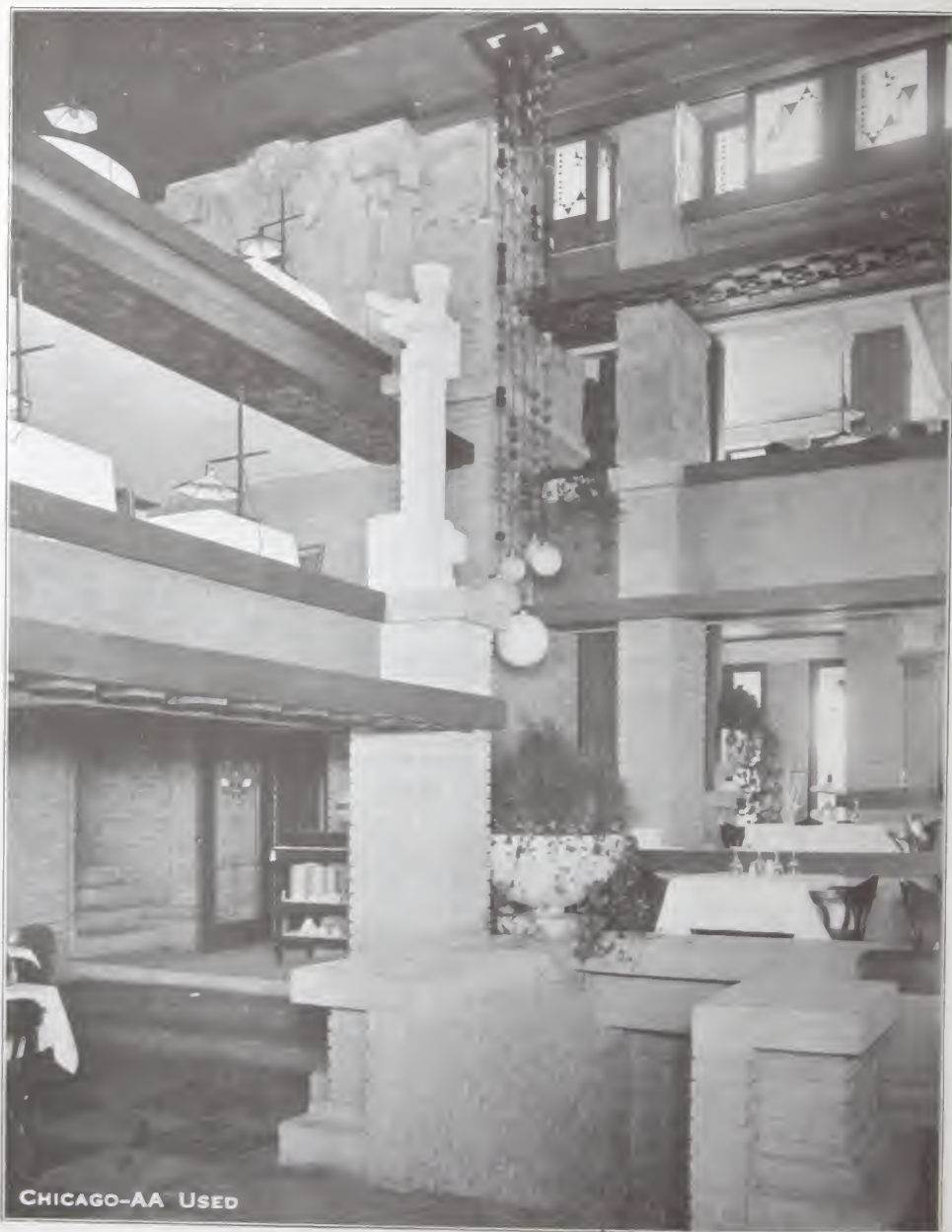
“The gardens are about square in shape. At the east is the main pavilion, several stories in height—though the stories are really low-ceiled balconies ranged around a main central room. In the front of the building, on either side, are two smaller rooms with leaded glass windows and mission woodwork, to be used as grill rooms. In the basement are the kitchens, ice-boxes, serving counters, etc. Inclined ways lead up and out from this level to that of the central court on either side. The switchboards for the lighting system, lavatories, etc., are also located in the basement.

“Stretching from either end of this structure down the sides of the great open court in the center are two colonnades of two stories each. The platform for the orchestra is at the west side of the court. The walls for the shell are of brick, while the curved shell itself is of brown-stained woodwork.

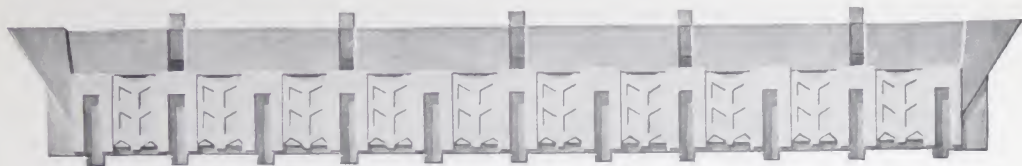
“The court, however, is not an unbroken square, but is in reality a series of terraces. Across the front of the orchestra stand is one terrace about 15 feet wide. A low brick wall with a concrete coping divides this from the main court, a little below. Through the center of the court and parallel to the stand runs a low concrete wall dividing it into two sections, the one away from the stand being elevated about 18 inches above the other. As the court approaches the pavilion and colonnades, a double line of terraces rises, the walls being of brick with concrete copings.

“The main body of the pavilion occupies the central two-thirds of the east side of the gardens. At either side, massive brick pedestals rise to the level of a low overhanging balcony, the wall of which is con-

(Continued on page 13)



An attractive and interesting corner of the Winter Garden.



structed of ornate flagreed panels of concrete, capped by a concreted coping. Above the level of this balcony, the pedestals are continued in rectangular ornamented panels of concrete. At either end of the balcony stands a winged figure holding a cube aloft, all cast in concrete. Behind and inside these pedestals, others of the same concrete panels rise and between these runs a high wall of the panels.

“From either side of this main portion of the pavilion, wings run out to the corners where the colonnade joins it. These wings preserve the same horizontal lines of the balcony and brickwork above it and carry them on to the colonnade. Here in the corner structures, are more balconies and more ornamental concrete panel work. Along the terrace wall in front of each wing is a row of eight spindles in the form of female figures, again in concrete. The walls joining the ends of the colonnades with the orchestra stand are of brick for a few feet, then of concrete panels for the rest of their height.

“The design and construction of the buildings offer many points of interest. All floors and interior columns are of reinforced concrete. CHICAGO-AA Portland Cement, sand and crushed stone are used for this work. The materials were mixed in two different plants, the one at the east using a Ransome mixer, that at the west a Marsh-Capron. The concrete was wheeled to place in barrows directly or transported in barrows to double platform elevators and hoisted to the upper stories. The reinforcement consists of twisted square and plain round rods, the flat slab method of construction being used. In many places there are cantilever sections of flooring and balconies which presented interesting problems of design, in which I-beams have been used as well as the rod reinforcement. Interior walls are largely made of structural tile. These are plastered over, No. 24 gauge 3-pound special expanded metal being used as lathing for the plaster.

“The mass and reinforced concrete work was poured in the usual way, employing wooden forms. In many places, such as the ceilings of the colonnades and bottoms of balconies, where this poured work is to be the final surface and is to be exposed, narrow, shallow strips of wood were nailed to the bottom forms, making a pattern sunk into the finished concrete.

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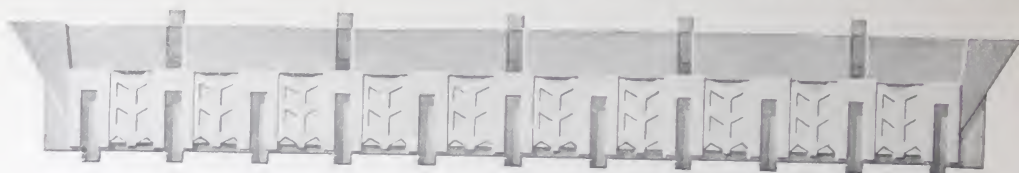
Arcade Balcony showing details of construction.



"The architectural concrete work was done in a very different manner. The plant for this work was in the rear of the gardens supervised by Mr. A. Iannelli, the sculptor of the figures and panels. There are nearly 100 of the figures in all, and many hundred panels of different designs. Patterns, similar to those used in making castings in a foundry, have been made of wood and plaster, exactly reproducing the desired figures. From these patterns molds are made of paper and glue-like gelatinous substance, the mold for a figure being divided into two parts. In these molds the figures are poured. When they have set the molds are removed. This type of mold makes the work possible, since the figures contain angles which it would be impossible to secure with a rigid mold. Water from a hose is kept spraying over the completed figures until they have cured sufficiently to allow them to become dry. Here is also a carpenter shop for making wooden forms, with a saw rig driven by a Novo gasoline engine."

Some of the designs were such as to necessitate a mold of over eighty individual parts, which could be removed one at a time to make it possible to free the cement casting, which was done in the dry cast process and removed immediately from the molds, as otherwise no such effect could have been produced. The Mueller Construction Company had a special corps of men thoroughly trained by much experimenting on former work. The unusual molded concrete work done on the Midway Gardens should be of great interest to the cement block industry, and should give this industry a great impetus in the right direction. Concrete workers would do well to make a careful examination of the work done on the Midway Gardens whenever opportunity presents itself.





Corner of Summer Garden showing Arcade terminal and ornamental light pole. Another unusual and highly artistic use of concrete.



Belvidere and entrance to Gardens. Dignified and artistic, with durability assured.



ON the following five pages we show views of different parts and features of *The Midway Gardens*. These views give an excellent idea of this unusual example of concrete construction and will doubtless be of intense interest to all architects, students of architecture, contractors, builders and workers in cement generally. Special attention is directed to the decorative sculpture which was cast complete at one molding.



*Decorative Sculpture
"Spindle" on wall of
the Sunken Garden.*

*Designed by
Frank Lloyd Wright,
Architect.*

*Executed by
A. Iannelli, Sculptor.*

Midway Gardens, Chicago.

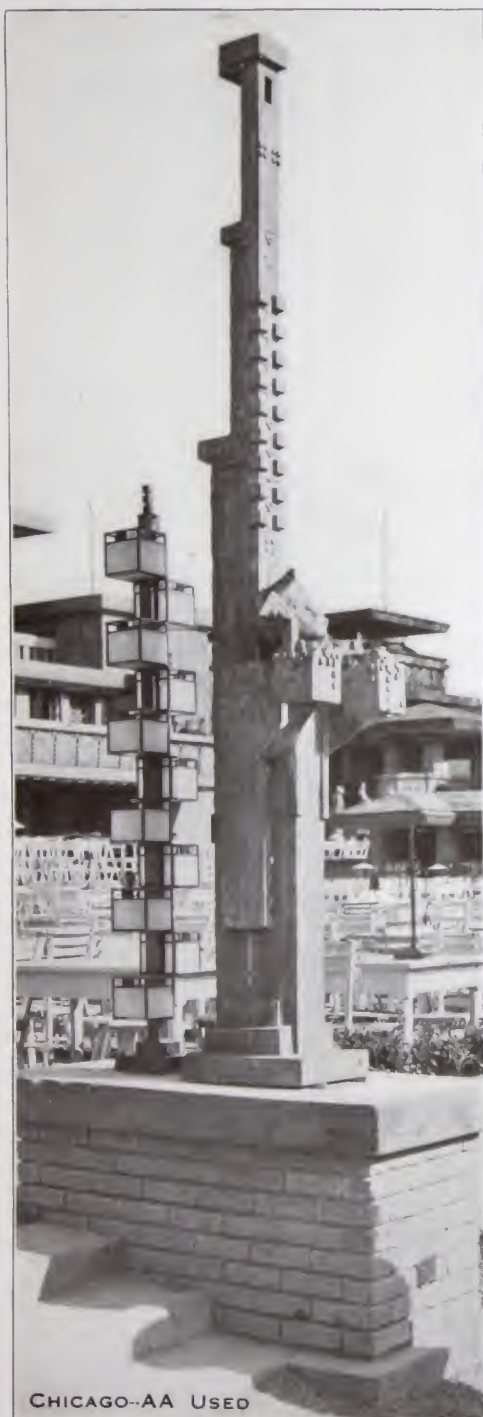
*Another Decorative
Sculpture "Spindle"
on wall of Sunken
Garden.*

*Designed by
Frank Lloyd Wright,
Architect.*

*Executed by
A. Iannelli, Sculptor*



Midway Gardens, Chicago.



*The "Totem Pole."
Decorative Sculpture in the Summer
Garden (incomplete
at the time this picture was made).*

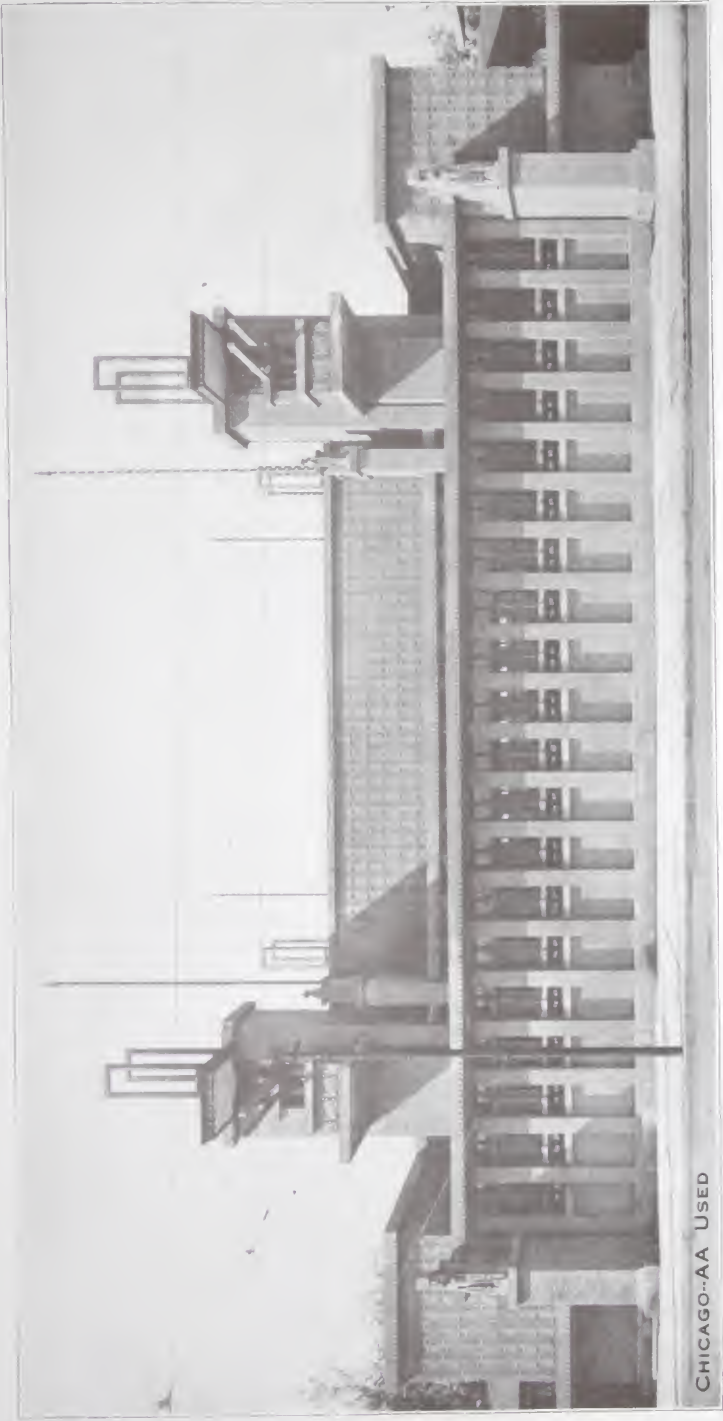
*Designed by
Frank Lloyd Wright,
Architect.*

*Executed by
A. Iannelli, Sculptor*

Midway Gardens, Chicago.



Decorative Sculpture "Queen of the Gardens," main cornice of Winter Garden. No attempt has been made to disguise the fact that this work has been done in concrete. Designed by Frank Lloyd Wright, Architect. Executed by A. Iannelli, Sculptor.



Winter Garden. (Towers unfinished at time of Photographing.) View from Cottage Grove Avenue.



Another Good Example of the Practical and Artistic Application of Portland Cement

Another example of the degree in which concrete has been employed in a most pleasing, profitable manner, is "The House that Jack Built," a country Club House twenty-two miles northwest of Chicago, on what is known as the Milwaukee Avenue Road.

Believing a description of "The House that Jack Built" will be of interest, we are reprinting an article, which, like the description of the Midway Gardens in the foregoing pages of this book, appeared in *The Cement Era*:—

"Notable among the suburban club houses lately erected in the neighborhood of Chicago is 'The House that Jack Built,' named after the old English nursery rhyme. Incidentally, the Manager, Mr. A. E. Frost, is known as 'Jack.' Mr. Frost, who was formerly assistant man-



"The House that Jack Built." View from the main road.



ager of the La Salle hotel, Chicago, and Mr. Harry Wuerzinger originated the scheme, designed to fill the growing need of exclusive wayside accommodations for automobile parties.

“The principal and governing features of the scheme embodied the roadhouse or wayside inn idea, while the desire to maintain a certain exclusiveness dictated the club idea, and the architect may be congratulated upon the very practical and harmonious solution of the dual proposition.

“After naming the club house, it was considered a necessary part of the scheme to retell, in Portland Cement plaster, the old and well-known nursery tale of ‘The House that Jack Built.’ The designs of Mr. K. M. Vitzthum, the architect, in this respect, have been very ably carried out in modeling done by the Architectural Decorating Company of Chicago, and in color by Mr. Gustave A. Brand and Company, of Chicago.

“Travelers approaching from the east along the Milwaukee Avenue



Closer view showing entrance to “The House that Jack Built.”



Road gain a most pleasing view of the house and grounds, and upon approaching the entrance gates designed on the old style English gate lodges, the visitor is greeted by the reputable Mr. Jack, the keystone of the establishment, who symbolically rings the dinner bell with one hand and keeps order with a staff in the other; he bids you be on time if you have a date with him and to 'Behave yourself properly or not at all' while you are under his roof. Directly under the lodge and in the center of the gateway he has conveniently placed his sacks of malt to serve as bumpers for the careless drivers, and his cat and dog on opposite imposts continually watch for their prey. The lodge is done in concrete, the workmanship is very clever, and the design extremely pleasing. The stately elms on either side of the lodge add a great deal to the attractiveness of the entrance.

"The driveway leading from the gate lodge to The House that Jack Built is lighted by artistic lamps, mounted on concrete posts of dignified design. The guests arrive, and alight at the entrance under an ample porte cochere, and passing a vestibule, immediately enter a spacious reception room containing all the conveniences of an up-to-date club



Unique Lodge at entrance to the grounds of "The House that Jack Built."



house. In this room Mr. Gustave A. Brand has told the whole nursery rhyme in a highly pleasing manner in words and symbols arranged around the picturesque frieze, and the over-mantel consists of a painted picture of Mr. Vitzthum's design of *The House that Jack Built*.

"Leading out of the reception room are the checking room, ladies' retiring room, Mr. A. E. (Jack) Frost's office, and the bar room. The conveniences provided for the ladies and gentlemen are equal to those of the best hotels, and in addition to the additional retiring room accommodations there are separate private wash and dressing booths for the comfort of the ladies, and shower baths for gentlemen who have motored for long distances over dusty roadways. The partitions and wainscots are of marble, and the floor of mosaic tile on concrete.

"A wide and well-appointed corridor on the right side of the fire place leads to the private dining rooms, the bar room, and the main dining porch, or to the corridor on the left end of the room, leading past



Detail of ornamental concrete Lodge.



the cigar counter and "Jack's" office, through the open porch, and also to the main dining porch which may also be approached through the ball room.

"The ball room is, perhaps, most noticeable on account of Mr. Brand's excellent and highly artistic wall paintings representing an old English hunting scene cleverly arranged as a continuous picture around the entire room and ending with the view entitled 'Bringing Home the Trophy,' notwithstanding the necessary interruptions occasioned by several doors.

"While the house is of frame construction on Portland Cement concrete foundations, the entire floor of the main dining porch is of reinforced concrete on foundation piers of the same material, the top finish being divided by wire cut lines into a tile pattern. The inside and outside walls of the main dining porch are finished in Portland Cement



Reception Room, "The House that Jack Built."



plaster, and the appearance is extremely light and elegant, and the color absolutely uniform. The porch is enclosed on all sides with glazed screens above the sill at table height, hung to open quadrifold on the inside, and the openings entirely filled with screens outside the glass sashes.

“The entire building has been so laid out on the grounds that the main dining porch enjoys on all sides picturesque views of the winding Des Plaines river, upon which the lawns abut. Tennis courts, golf links, clay pigeon traps, etc., are convenient to the club house, and the natural surroundings will enable the management to produce some most pleasing effects in the way of landscape gardening. However, this feature will not receive a great deal of attention this year, owing to the fact that the season is far advanced.

“The exterior of ‘The House that Jack Built’ is a sample style of an English country house, exhibiting some half-timber effects in the



Ball Room, “The House that Jack Built.”



gables, but otherwise the whole exterior is finished with Portland Cement plaster on expanded metal. The roofs and dormer windows are covered with shingles.

“The F. L. Wuerzinger Company was the general contractor, Mr. Nicholas Melzer did the cement work, and CHICAGO-AA Portland Cement was used throughout.”



Dining Room, "The House that Jack Built."



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